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## WAGES IN AMERICAN CITIES.

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Studies in the comparative statistics of cities are of importance because they place emphasis on extending the realm of knowledge about our cities and because they stimulate a healthy rivalry. Readers will appreciate the value of such studies by recalling comparative statistics with which they are familiar, such as death rates, figures of illiteracy, percentages of street area paved, and growth of population. The purpose of this paper is to direct attention to a possible ranking of cities in the average amount of wages paid. The importance of knowing wage conditions is of course very great and is emphasized particularly when we remember that we are living in an age when the fight against poverty is greater than ever before, when we are setting a minimum wage in one state after another and when many investigators are claiming that low wages are the one factor to which an increasingly large number of social ills can be traced.

In Table I is seen the ranking of 37 cities of the United States in the average union wage per hour in 10 trades. The data from which the averages and ranking were computed are for May, 1914, published in Bulletin No. 171 of the United States Bureau of Labor Statistics. It would be desirable to have a larger list of cities but the range of choice was unfortunately limited to the 41 cities from which the Bureau collected statistics. The list of 41 cities was reduced to 37 in number because data for the 10 trades were not given in 4 of the cities. These cities, however, are located in 29 different states and are the largest cities in their respective sections. They also represent typical geographical divisions and typical industrial areas, such as coal regions and textile districts.

The ranking of the cities is on the basis of average hourly union wages in the following 10 trades: bricklayers, carpenters, painters, plasterers, plumbers and gas fitters, day compositors in book and job printing, night compositors in book and job

printing, day compositors in newspaper printing, day and night linotype operators. It would have been desirable to include wages for unskilled work and salaries, but these were impossible to obtain. Indeed it was not possible to obtain data for all of the 37 cities in more than these 10 trades. For the different cities data were given for 20 to 80 trades but only 10 trades were found common to all of the 37 cities.

TABLE I.

RANKING OF 37 CITIES IN AVERAGE UNION WAGES PAID IN 10 TRADES. (a)

Rank.	Cities.	Cents per Hour.
1	Seattle.....	71
2	San Francisco.....	69
3	Portland, Ore.....	67
4	Salt Lake.....	65
5	Denver.....	64
6	Chicago.....	64
7	St. Louis.....	64
8	New York.....	64
9	Los Angeles.....	62
10	Kansas City, Mo.....	62
11	Pittsburgh.....	61
12	Boston.....	60
13	Newark.....	59
14	Washington.....	58
15	Cincinnati.....	58
16	St. Paul.....	57
17	Memphis.....	57
18	Cleveland.....	57
19	Omaha.....	56
20	Indianapolis.....	56
21	Detroit.....	56
22	Birmingham.....	55
23	Milwaukee.....	54
24	Little Rock.....	54
25	Louisville.....	54
26	New Orleans.....	53
27	Buffalo.....	53
28	Springfield, Ill.....	53
29	Baltimore.....	53
30	Jacksonville.....	53
31	Providence.....	52
32	Minneapolis.....	52
33	Scranton.....	50
34	Philadelphia.....	50
35	New Haven.....	50
36	Atlanta.....	43
37	Charleston, S. C.....	38

(a) The 10 trades are bricklayers, carpenters, painters, plasterers, plumbers, gas fitters, day compositors in book and job printing, night compositors in book and job printing, day compositors in newspaper printing, and day and night linotype operators.

The ranking of the cities in Table I may be considered as accurate for the 10 trades. But we are interested in knowing the ranking of these cities in all trades, as well as in a selected list of 10 trades. The question then is: How satisfactory an index is the ranking in wages in 10 trades for the

ranking in wages in all trades? How true is the sample of the whole? Since data for all trades or a very large number of trades are not given for every one of the 37 cities, how can we test the truth of the ranking in 10 trades? Although wages in a very large number are not given for every one of the 37 cities, how can we test the truth of the ranking in 10 trades? Although wages in a very large number of trades are not given for every one of the 37 cities, a very good approximation can be made by resorting to the device of breaking up the list of 37 cities into small groups. For the cities of each small group, there will be a greater number of common trades than there was for the total number of cities. A ranking may then be made for the cities in each small group on the basis of a large number of trades and comparisons made with the ranking of the same cities on the basis of the 10 trades. Upon comparison, if the relative position of any given city remains practically the same in both rankings, then the ranking on the basis of 10 trades may be accepted as a good sample, a satisfactory index of the whole. The geographical divisions were found most convenient for separating the cities into small groups and a larger number of common trades were actually found. For example in the column on the left below are listed the 6 Western cities and the average wage paid in the 10 trades; the figures in the right-hand column represent the average wages in the 35 trades that were found common to the cities of this small group.

Seattle . . . . .	71	San Francisco . . . . .	66
San Francisco . . . . .	69	Seattle . . . . .	64
Portland . . . . .	67	Portland . . . . .	61
Salt Lake . . . . .	65	Salt Lake . . . . .	59
Denver . . . . .	64	Denver . . . . .	57
Los Angeles . . . . .	62	Los Angeles . . . . .	57

The only change in the ranking is in the interchange of Seattle and San Francisco in the first place. For the Western cities, then, the ranking on the basis of 10 trades may be considered as a good index of a ranking on a large number of trades.

In Table II is found the comparison in the ranking of all of the cities by groups, in the manner presented above for the Western cities.

TABLE II.  
COMPARISON OF RANKING OF CITIES IN WAGES PAID IN 10 TRADES WITH RANKING  
IN WAGES PAID IN A LARGER NUMBER OF TRADES.

Groups of Cities and Number of Trades in Each.		Average Hourly Union Wage Paid in 10 Trades.	Average Hourly Union Wage Paid in Large Number of Trades.	Rank on Basis of 10 Trades.	Rank on Basis of Larger Number of Trades.
North Atlantic, 20	New York.....	64	63	1	2
	Pittsburgh.....	61	55	2	4
	Boston.....	60	59	3	3
	Newark.....	59	63	4	1
	Buffalo.....	53	51	5	6
	Providence.....	52	53	6	5
	Scranton.....	50	49	7	9
	Philadelphia.....	50	50	8	7
	New Haven.....	50	50	9	8
South Atlantic, 13	Washington.....	58	57	1	1
	Baltimore.....	53	51	2	2
	Jacksonville.....	53	52	3	3
	Atlanta.....	43	43	4	4
	Charleston.....	38	34	5	5
North Central, 20	Chicago.....	64	62	1	1
	St. Louis.....	64	61	2	2
	Kansas City.....	62	60	3	3
	Cincinnati.....	58	54	4	8
	St. Paul.....	57	53	5	10
	Cleveland.....	57	55	6	4
	Omaha.....	56	54	7	7
	Indianapolis.....	56	53	8	9
	Detroit.....	56	54	9	6
	Milwaukee.....	54	50	10	12
	Springfield.....	53	51	11	11
	Minneapolis.....	52	54	12	5
South Central, 16	Memphis.....	57	54	1	3
	Birmingham.....	55	55	2	2
	Little Rock.....	54	56	3	1
	Louisville.....	54	51	4	5
	New Orleans.....	53	54	5	4
Western, 35	Seattle.....	71	64	1	2
	San Francisco.....	69	66	2	1
	Portland.....	67	61	3	3
	Salt Lake.....	65	59	4	4
	Denver.....	64	57	5	5
	Los Angeles.....	62	57	6	6

Columns five and six show the ranking of the cities in wages on the basis of 10 trades and on the basis of a larger number of trades. Comparing the figures in these two columns it is seen that the rank of one half of the cities is the same on the basis of 10 trades as when the wages for a larger number are used and that, although one city is shifted seven places in the ranking, the average shift is one place. It is true that the

number of trades is small in the second ranking and even greater changes would be found if the whole list of cities served rather than the small groups as the basis for the ranking. The conclusion of this somewhat detailed analysis is that on the average a city in Table I is not removed by more than two or three positions from the rank it would have received in a table constructed on the basis of a larger number of trades.

One of the most striking points to be noted in Table I is the relatively low ranking of Philadelphia as compared with New York. This difference in wages paid in two large port cities in the same economic section of the country and separated by such a short distance was so unexpected that it seemed desirable to test the results further. Accordingly the two cities were compared on the basis of hourly union wages paid in 69 common trades, with a result which showed that in New York an average wage of 54 cents an hour was paid, while in Philadelphia for the same 69 trades, an average hourly wage of 43 cents was paid. Thus, using the wage for 69 common trades, the average hourly wage in New York was found to be 11 cents higher than in Philadelphia, whereas on the basis of 10 trades the difference was found to be 14 cents. The difference in the average wages paid in the two cities is slightly lowered when a larger number of trades is considered, a result which would doubtless be found to hold with all of the cities if they were similarly tested. Therefore, judging from these added data, there is no reason to think that the relative ranking of New York and Philadelphia in Table I is not approximately correct.

It should be remembered that the data in Table I show not the actual wages paid, but rather only the ranking of the cities. If there were a very large number of union trades common to all of the cities, the actual wages paid would probably be some 10 cents an hour less than the figures given in Table I. For we found that in New York the average wage of 69 trades is 10 cents less than the average wage of 10 trades and in Philadelphia the average wage of 69 trades is 7 cents less than the average wage of 10 trades.